

DRINKING WATER LESSON

In classroom lesson - 90 minutes

Objective: Students will understand the difference between tap and bottled water as well as where our local drinking water comes from and how it is made potable.

Materials needed for 15 students:

- Four bottled waters of each kind, with labels removed. Each bottle should be marked with a 1, 2 or 3 to keep track
- Tap water in indistinguishable bottles
- Cups
- Printed chart for each student

1. Introduction

- a. Introduce ourselves: who we are, where we work, why we're here
- b. Students introduce themselves: name and one way they've used water today

2. Introduction of topic. Drinking water is important! It's essential for our survival and wellbeing. We don't often think about what is behind turning on the tap, so today is an opportunity to learn all about what's behind this resource we rely on.

- What do you know about where drinking water comes from?
- What are ways tap water is used every day? *List responses on board*

In pairs:

- What is drinking water like in your home community?
- Do you prefer drinking tap water or bottled water? Why?

Share out after each question

Tally preferences between tap and bottled water on the board

3. Watch "The Story of Bottled Water" video -- English version or Spanish version

- Debrief: What was most surprising or interesting to you?

4. Drinking water test: In groups of 3-4, each person does taste test and fills out own chart

- Explain the procedure
- Pass out materials
- Give examples of wording you can use to fill out chart (have chart on board)
 - a. Students each taste the three water samples and fill out their chart
 - b. Ask students, and record answers on the board, using tick marks:
 - Did you notice a difference in color in any of them?
 - Which was the best smelling? Tasting?
 - Which one do you think is tap water?
 - c. Instructor reveals the types of water associated with each number & the costs
 - Dasani (#1) and Aquafina (#2) each cost: \$13.44/gallon and
 - Renton tap water (#3) costs \$0.005 per gallon (half a cent!)
 - d. What do you think about bottled water now?

- e. Did you know that Dasani is owned by Coca Cola? That means Coke buys water at the cheap municipal rate and then charges consumers over 2,000 times that rate! They are making a lot of money off of us, so it's important to be aware of this
5. Discuss where local (Renton) water comes from and how it's treated
- a. Use online map as visual aid (with each drinking water source marked, as well as school).
 - Using map, show the four sources that Renton's drinking water comes from:
 - i. Five downtown wells, located in Liberty and Cedar River Parks, which draw water from the Cedar Valley Aquifer; *Show visual of an aquifer for reference (see pg 4).*
 - ii. Springbrook Springs
 - iii. Maplewood wellfield located in the Maplewood Golf Course
 - iv. Chester Morse Lake (reservoir), through Seattle Public Utilities
 - b. This is how the water is cleaned to make it potable: [show diagram](#)
 - It is screened to remove grit, then chlorine, fluoride and lime are added
 - i. Chlorine is added to kill viruses and bacteria that could make people sick
 - ii. Fluoride is added to protect dental health
 - iii. Lime is another chemical that is added to protect the pipes from corroding
 - c. How much drinking water do you think we each use on average each day in the United States?
 - i. Explain that the average is 100 gallons per day!
 - ii. Conserving water is vital: People rely on fresh water to survive, and so do all animals and plants. Therefore, we have to be responsible with how much we use and leave plenty in the rivers and lakes for other forms of life. Each year the amount of water that is available changes, depending on how much it snowed in the mountains over the winter. It's important to use water carefully, and treat it as the precious resource it is.
6. Closing –
- Recap of what was learned, including through the taste test.
 - a. What's something new you learned?
 - b. Has your opinion about tap or bottled water changed?
 - Mention what we'll learn about next time

ENGLISH-SPANISH VOCABULARY LIST --

Bottled water – Agua embotellada
 Tap water – Agua del grifo
 Sources – Fuentes de agua
 Chemicals – Productos químicos
 Fluoride – Fluoruro
 Chlorine - Cloro

Fresh – Fresco
 Drinking water – Agua potable
 Well - Pozo
 Spring – Agua de manantial
 Reservoir – Depósito de agua
 Aquifer – Acuífero
 Conserve – Conservar Pipes - Tubería

Water bottle	Smell (olor)	Color	Taste (sabor)	Cost
#1				
#2				
#3				

Water bottle	Smell (olor)	Color	Taste (sabor)	Cost
#1				
#2				
#3				

Water bottle	Smell (olor)	Color	Taste (sabor)	Cost
#1				
#2				
#3				

Image of aquifer for student reference:

https://www.google.com/url?sa=i&source=images&cd=&ved=2ahUKewjDtJS77qPIAhXFJTQIHraTA9cQjB16BAgBEAM&url=https%3A%2F%2Fwww.minambiente.gov.co%2Findex.php%2Fcomponent%2Fcontent%2Farticle%2F1936-acuiferos&psig=A0vVaw3M6c1r2tEZuQu_nVGO5vwB&ust=1571421217444975

